

Listing of the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1-23 (Cancelled).

Claim 24 (New): A wireless communication system, comprising:

a first wireless communication node having a first MAC layer element adapted to generate a request to transmit a data element, the request including a transmission bandwidth for the data element and a transmission priority for the data element, and a physical layer element operatively coupled to the first MAC layer element adapted to transmit the request; and

a second wireless communication node having a second physical layer element adapted to receive the request from the first wireless communication node and a second MAC layer element operatively coupled to the second physical layer element adapted to determine acceptance of the request based on the transmission bandwidth and schedule transmission of the data element based on the transmission priority.

Claim 25 (New): The wireless communication system of claim 24, wherein the transmission priority is encoded in an IEEE 802.1Q tag within the request.

Claim 26 (New): The wireless communication system of claim 24, wherein the transmission bandwidth is determined based on an examination of the data element.

Claim 27 (New): The wireless communication system of claim 24, wherein the second MAC layer element determines acceptance of the request and schedules transmission of the data element without resort to any network layer element.

Claim 28 (New): The wireless communication system of claim 24, wherein the first wireless communication node is an IEEE 802.11 peripheral system.

Claim 29 (New): The wireless communication system of claim 24, wherein the second wireless communication node is an IEEE 802.11 access point.

Claim 30 (New): A wireless communication node, comprising:

a physical layer element adapted to receive a request to transmit a data element, the request including a transmission bandwidth for the data element and a transmission priority for the data element; and

a MAC layer element operatively coupled to the physical layer element, the MAC layer element adapted to determine acceptance of the request based on the transmission bandwidth and schedule transmission of the data element based on the transmission priority.

Claim 31 (New): The wireless communication node of claim 30, wherein the transmission priority is encoded in an IEEE 802.1Q tag within the request.

Claim 32 (New): The wireless communication node of claim 30, wherein the MAC layer element determines acceptance of the request and schedules transmission of the data element without resort to any network layer element.

Claim 33 (New): The wireless communication node of claim 30, wherein the wireless communication node is an IEEE 802.11 access point.

Claim 34 (New): A first wireless communication node, comprising:

a first MAC layer element adapted to generate a request to transmit a data element, the request including a transmission bandwidth for the data element and a transmission priority for the data element; and

a physical layer element operatively coupled to the first MAC layer element and adapted to transmit the request to a second wireless communication node having a second MAC layer element adapted to determine acceptance of the request based on the transmission bandwidth and schedule transmission of the data element based on the transmission priority.

Claim 35 (New): The first wireless communication node of claim 34, wherein the first MAC layer element encodes the transmission priority in an IEEE 802.1Q tag within the request.

Claim 36 (New): The wireless communication node of claim 34, wherein the second MAC layer element determines acceptance of the request and schedules transmission of the data element without resort to any network layer element.

Claim 37 (New): The wireless communication node of claim 34, wherein the first wireless communication node is an IEEE 802.11 peripheral station.

Claim 38 (New): The wireless communication node of claim 34, wherein the second wireless communication node is an IEEE 802.11 access point.

Claim 39 (New): A method for wireless communication, comprising:

receiving a request to transmit a data element, the request including a transmission bandwidth for the data element and a transmission priority for the data element encoded in an IEEE 802.1Q tag within the request; and

determining acceptance of the request based on the transmission bandwidth and scheduling transmission of the data based on the transmission priority without resort to any network layer element.

Claim 40 (New): The method of claim 39, wherein the determining and scheduling steps are performed by a MAC layer element.

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Claim 41 (New): The method of claim 39, wherein the method is performed by an IEEE 802.11 access point.